Virginia Works Newsletter

Check That Water Heater

Several businesses went without power for some time due to this winter's ice storm. When the electrical power went out, many people realized how reliable water heaters are. Due to the storage capacity of these hot water systems, there was sufficient hot water to last one or two days after the power loss. While water heaters have proven to be dependable, they have to be maintained or they can quickly become very hazardous pieces of equipment.

Take the case of the water heater in a Baltimore public school in June, 1996. The controls for the unregistered and uninspected water heater failed and allowed the water to reach dangerous temperatures. It is believed the safety relief valve also malfunctioned and, ultimately, a student of the school was severely burnt. No one knew how to turn the water heater off. The primary safety controls and safety relief valve did not work. In some respects, the action of the burnt student, by flushing the toilet, may have saved some lives, as built-up pressures within the piping system were released.

There are several lessons to be learned from this incident: An overheating water heater can quickly be identified by steam or a mixture of steam and water being discharged at the safety relief valve or from an open hot water faucet. If this condition is found at a faucet, close the faucet. In both cases, immediately shut down the water heater's source of heat. Allow the water heater to cool naturally without the addition of excess cold water.

An overheating water heater may exhibit the following conditions: 1) a discharging safety relief valve; 2) pressure and/or temperature readings above the maximum allowed for the heater; and 3) scorched or burning paint on the skin casing.

When a water heater is overheating, the only safe intervention is to REMOVE THE HEAT SOURCE BY STOPPING THE SUPPLY OF FUEL OR AIR. No one should try to relieve the pressure, add cool water into the vessel, or try to cool the vessel with water. Let the vessel cool down naturally, and get way from it. Then, call a qualified repair company and notify DOLI's Boiler Safety staff.

Prevention through Inspections

Under the Boiler Safety Act, Virginia requires inspections of water heaters over 120 gallons or a heat input of 200,000 Btu/hr every two years. Safety valves should be checked every two months.

Inspection can be carried out by the insurance company that insures the water heater or a contract fee inspector. A certificate indicates that a unit passed inspection.

When actual or potential problems arise, call our Boiler Safety staff at (804) 786-3169 or send a fax to (804) 371-2324. Note the VA number on the certificate. The jurisdictional official will need it to locate and identify the unit.

Contributed by Fred Barton, Boiler Safety Director